POWER SYSTEMS WITH MULTIPLE REDUNDANT COOPERATING TRANSFORMERS

ABSTRACT

Disclosed are methods, systems, and devices that include a power source having a first voltage having a first frequency, a power-consuming load(s), and a first transformer set comprising a delta-delta transformer and a first voltage controller coupled in series thereto, an input coupled to the power source, producing as output a second voltage having a second frequency and coupled to the power-consuming load(s). Also, a second transformer set has a wye-delta transformer, and a second voltage controller coupled in series thereto, an input is coupled to the power source, producing a phase-shifted third voltage output at a third frequency that is coupled to the power-consuming load(s). The first and second transformer sets are coupled in a parallel configuration such that the second and third voltage signals combine to produce a fourth voltage signal having a fourth frequency.